

A METHOD FOR CARING FOR A FABRIC ARTICLE AND
FOR PROVIDING A SYSTEM THEREFOR

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Cross Reference to Related Application

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FIELD OF THE INVENTION

The present invention relates to a method for caring for a fabric article.

BACKGROUND OF THE INVENTION

It is known to clean a fabric article, such as clothing, by laundering it with a
laundry detergent composition, and softening it by, for example, applying a fabric
conditioning composition thereto. Furthermore, it is also known to employ other fabric
treatment compositions to a fabric article for specific purposes, such as a pre-treater to
remove stains, a starch to stiffen the fabric upon ironing, etc.

Accordingly, there exist many, many laundry detergent compositions, fabric
conditioning compositions, and fabric treatment compositions for the consumer to
choose from. Each of these fabric care products is typically provided separately, with
little or no indication as to what products are preferred for use together. This, in turn,
provides the consumer with an immense number of fabric treatment combinations to
choose from, even if they just use three fabric care products, such as a laundry
detergent, a fabric conditioning composition, and a single fabric treatment composition.
In fact, for these three products, the typical number of potential combinations in even a
single small store can easily approach a hundred, or more. With each additional fabric
treatment composition which a consumer uses, the number of possible choices
expands, dramatically, if not exponentially. Thus, a consumer may be intimidated by the
sheer number of choices available. Furthermore, in order to find the best fabric care
results, the consumer may have to try many combinations of products. Given this

immense task and the expense of purchasing many products, a consumer will typically settle for inferior results.

In addition, it is possible that many fabric care products are not specifically designed for use together. Thus, the information in their instructions may conflict and/or confuse the consumer. In fact, actual damage to the fabric article may occur if incompatible fabric care products inadvertently interact and/or cross-react. For example, an anionic surfactant and a cationic fabric conditioning agent may form insoluble precipitates when they are inadvertently combined.

The hair care industry has addressed this complexity by developing hair care systems and methods for treating hair which provide a plurality of products which may synergistically work together to provide a better hair care result. For example, a hair care system may include a hair shampoo, a hair conditioner, and an adjunct hair care component such as a hair straightener, a hair dye, a hair bleach, etc. However, such a systematic approach has not been applied in the fabric care industry.

Accordingly, the need exists for an improved method for caring for a fabric article. The need also exists for a method for providing the consumer with an easy, clear system for achieving improved fabric care results. Finally, the need exists for a method for reducing consumer confusion about the multitude of fabric care combinations available, while minimizing the possibility of undesirable product interactions.

SUMMARY OF THE INVENTION

The present invention relates to a method for caring for a fabric article including the steps of providing a laundry detergent composition, a fabric conditioning composition, or combination thereof, providing a fabric treatment composition, laundering and/or conditioning the fabric article with the laundry detergent/fabric conditioning composition, as appropriate, and treating the fabric article with the fabric treatment composition. The fabric treatment composition is selected from a bleaching composition, a color maintenance composition, a dryer sheet composition, a finishing composition, a pre-treating composition, and a combination thereof. A method is also described herein, which includes the steps of providing at least two different fabric treatment compositions, and applying them to the same fabric article. At least one set of instructions, typically including a set of laundering and/or conditioning instructions and a set of fabric treatment instructions, is also provided. The set of fabric treatment instructions include a recommendation to use the fabric treatment composition in

combination with the laundry detergent composition, the fabric conditioning composition, and/or the other fabric treatment composition.

The present invention also includes a method for providing a fabric care system having the steps of providing a laundry detergent composition and/or a fabric conditioning composition, providing a fabric treatment composition, and providing a set of fabric treatment instructions. The set of instructions include a recommendation to use the fabric treatment composition in combination with the laundry detergent composition and/or the fabric conditioning composition.

The present invention further includes a method for providing a fabric care system having a first fabric treatment composition, a second fabric treatment composition different from the first fabric treatment composition, and a set of fabric treatment instructions. The fabric treatment instructions includes a fabric treatment recommendation to use the first fabric treatment composition in combination with the second fabric treatment composition.

It has now been found that an improved method for caring for a fabric article may be easy to use, and clearly understood by the consumer. Furthermore, such a method may provide one or more improved fabric care results, such as improved cleaning, whitening, softness, comfort to skin, absorbency, malodor elimination, perfume fragrance retention and release, color retention, shape retention, fabric integrity maintenance, stain removal, ease of ironing, wrinkle reduction, static reduction, etc. Such benefits may be especially significant and noticeable after multi-cycle application to the same fabric article. In addition, the method of providing a fabric care system of the present invention may significantly reduce consumer confusion regarding synergistic fabric care combinations. Furthermore, such a method and/or system may reduce undesirable cross-reactions and interactions between incompatible ingredients. In addition, the compositions are typically compatible with all types of natural and artificial fabric articles, such as those formed from cotton, nylon, rayon, wool, and silk, and may be advantageously personalized and/or customized to provide synergistic care for specific fabric articles, or specific consumer needs.

These and other features, aspects, advantages, and variations of the present invention, and the embodiments described herein, will become evident to those skilled in the art from a reading of the present disclosure with the appended claims, and are covered within the scope of these claims.

DETAILED DESCRIPTION OF THE INVENTION

All percentages, ratios and proportions herein are by weight, unless otherwise specified. All temperatures are in degrees Celsius (°C) unless otherwise specified. All documents cited are incorporated herein by reference in their entireties. Citation of any reference is not an admission regarding any determination as to its availability as prior art to the claimed invention.

As used herein, the term "alkyl" means a hydrocarbyl moiety which is straight or branched, saturated or unsaturated. Unless otherwise specified, alkyl moieties are preferably saturated or unsaturated with double bonds, preferably with one or two double bonds. Included in the term "alkyl" is the alkyl portion of acyl groups.

As used herein, the term "fabric article" means any fabric, fabric-containing, or fabric-like item which is laundered, conditioned, or treated on a regular, or irregular basis. Non-limiting examples of a fabric article include clothing, curtains, bed linens, wall hangings, textiles, cloth, etc. Preferably, the fabric article is a woven article, and more preferably, the fabric article is a woven article such as clothing. Furthermore, the fabric article may be made of natural and artificial materials, such as cotton, nylon, rayon, wool, and silk.

As used herein, the term "in combination with" means that the referred-to composition is applied to the same fabric article as another composition. The referred-to composition may be applied directly to the fabric article, e.g., in neat form, and/or indirectly, e.g., in diluted form, through the rinse cycle, etc., as appropriate. According to the usage of this term herein, the referred-to composition may be used before another composition, at the same time as another composition, and/or after another composition, as appropriate.

Laundry Detergent Composition

In the method of the present invention, a laundry detergent composition is provided. The laundry detergent composition useful herein is used in laundering a fabric article to remove undesirable materials such as dirt, oils, chemicals, body soils, etc. The fabric article is laundered with the laundry detergent composition, preferably during the laundering cycle of a washing process. Accordingly, the laundry detergent composition contains at least one deterative surfactant selected from the group consisting of an amphoteric surfactant, an anionic surfactant, a cationic surfactant, a nonionic surfactant, a zwitterionic surfactant, and combinations thereof.

Nonlimiting examples of deterative surfactants useful in the detergent composition include, the conventional C₁₁-C₁₈ alkyl benzene sulfonates and primary,

branched-chain and random C₁₀-C₂₀ alkyl sulfates, the C₁₀-C₁₈ secondary (2,3) alkyl sulfates of the formula CH₃(CH₂)_x(CHOSO₃⁻M⁺) CH₃ and CH₃ (CH₂)_y(CHOSO₃⁻M⁺) CH₂CH₃ where x and (y + 1) are integers of at least about 7, preferably at least about 9, and M is a water-solubilizing cation, especially sodium, unsaturated sulfates such as oleyl sulfate, the C₁₀-C₁₈ alkyl alkoxy sulfates; especially EO 1-7 ethoxy sulfates), C₁₀-C₁₈ alkyl alkoxy carboxylates (especially the EO 1-5 ethoxycarboxylates), the C₁₀-C₁₈ glycerol ethers, the C₁₀-C₁₈ alkyl polyglycosides and their corresponding sulfated polyglycosides, and C₁₂-C₁₈ alpha-sulfonated fatty acid esters. If desired, the conventional nonionic and amphoteric surfactants such as the C₁₂-C₁₈ alkyl ethoxylates including the so-called narrow peaked alkyl ethoxylates and C₆-C₁₂ alkyl phenol alkoxyates (especially ethoxylates and mixed ethoxy/propoxy), C₁₂-C₁₈ betaines and sulfobetaines, C₁₀-C₁₈ amine oxides, and the like, can also be included in the overall compositions. The C₁₀-C₁₈ N-alkyl polyhydroxy fatty acid amides can also be used. Typical examples include the C₁₂-C₁₈ N-methylglucamides. See WO 92/06154 to Cook, et al., published April 16, 1992. Other sugar-derived surfactants include the N-alkoxy polyhydroxy fatty acid amides, such as C₁₀-C₁₈ N-(3-methoxypropyl) glucamide. The N-propyl through N-hexyl C₁₂-C₁₈ glucamides can be used for low sudsing. C₁₀-C₂₀ conventional soaps may also be used. If high sudsing is desired, the branched-chain C₁₀-C₁₆ soaps may be used. Mixtures of anionic and nonionic surfactants are especially useful. Preferably, the laundry detergent composition comprises, by weight, at least about 0.01%; more preferably at least about 0.1%; even more preferably at least about 1%; and even more preferably still, from about 1% to about 55% deterative surfactant.

In addition to a deterative surfactant, a laundry detergent composition may further contain one or more adjunct ingredients known in the art, such as an anti-redeposition agent, a bleach, a bleach activator, a brightener, a builder, a carrier, a chelant, a clay soil removal agent, a dispersant, a dye, a dye-transfer inhibitor, an enzyme, an enzyme stabilization system, a fabric softening active, a filler, a hydrotrope, a perfume, a processing aid, a soil release polymer, a solvent, a suds booster, a suds suppressor, etc.

While the laundry detergent composition may contain one or more adjunct ingredients, for example, a fabric softening active, it is distinguished from a fabric conditioning composition in that a laundry detergent composition is applied to the fabric in the wash cycle, and thus, its primary function is to clean and remove undesirable materials from the fabric article.

The laundry detergent composition is not limited in physical form, and may be a granule, a powder, a liquid, a gel, a paste, a tablet, or a bar. Preferably, the laundry detergent composition's form is a granule, a powder, a liquid, or a gel, and more preferably, the laundry detergent composition is a laundry detergent shampoo composition in a liquid, or a gel form. Without intending to be limited by theory, it is believed that a liquid or a gel form may be more gentle on the fabric article, may be more soluble at low temperatures, and/or may be more effective on enzyme-susceptible soils.

Specific, non-limiting examples of a laundry detergent composition and/or a laundry shampoo composition useful herein include those described in, for example, WO 95/33044 to Vinson, et al., published on December 7, 1995; WO 99/09126 to Bettiol, et al., published on February 25, 1999; PCT Patent Application No. U.S. 00/00839 to Showell, et al., filed on January 13, 2000; U.S. Patent No. 5,916,862 to Morelli, et al., issued on June 29, 1999; U.S. Patent No. 5,565,145 to Watson, et al., issued on October 15, 1996; U.S. Patent No. 5,470,507 to Fredj, et al., issued on November 28, 1995; U.S. Patent No. 5,466,802 to Panadiker, et al., issued on November 14, 1995; U.S. Patent No. 5,460,752 to Fredj, et al., issued on October 24, 1995; U.S. Patent No. 5,458,810 to Fredj, et al., issued on October 17, 1995; and U.S. Patent No. 5,458,809 to Fredj, et al., issued on October 17, 1995.

The laundry detergent composition is provided in a laundry detergent composition container. The laundry detergent container will typically be a box, a bottle, and/or a pouch, which may further contain a dosing device or an applicator device such as a scoop, a measuring cup, a pour spout, etc. Solid and granular laundry detergent compositions are typically provided in a box or a bottle, preferably a cardboard box or a plastic box, and more preferably a laminated cardboard box, or a plastic box. Without intending to be limited by theory, it is believed that a laminated cardboard box and/or a plastic box may be especially advantageous, as these boxes may be easily recyclable, and may also be adjusted to provide desirable properties, such as a watertight seal, moisture resistance, reclosability, etc. Liquid and gel-type laundry detergent compositions are preferably provided within a plastic bottle, more preferably a recyclable plastic bottle such as a polyethylene and/or polypropylene bottle.

The laundry detergent composition typically includes a set of laundering instructions which contain a recommendation to use the laundry detergent composition in combination with at least one fabric treatment composition, preferably in combination with at least one fabric treatment composition and a fabric conditioning composition.

More preferably, the set of laundering instructions contain a recommendation to use the laundry detergent composition before the fabric conditioning composition, and in combination with the fabric treatment composition.

The set of laundering instructions may be provided in virtually any location and in any form (e.g., visual, audio, tactile such as braille, etc.), as long as it is perceivable to a consumer purchasing the laundry detergent composition. Thus, the set of laundering instructions may be provided on a location such as a pamphlet, a computer screen, a printed ticket, a kiosk, a sign, a product container, an advertisement, a product display, an Internet website, a video, and a combination thereof, preferably the set of laundering instructions are provided on a product container, a product display, or a combination thereof, as these locations are easy to reference. More preferably, the set of laundering instructions are provided on the laundry detergent composition container, as the set of laundering instructions is thus unlikely to become lost and/or separated from the laundry detergent composition when it is needed.

In a preferred embodiment, the set of laundering instructions also contain a reference to the fabric conditioning composition, the fabric treatment composition, or both. More preferably, the reference is the actual name of the fabric conditioning composition, and/or the fabric treatment composition. Without intending to be limited by theory, it is believed that such a reference may significantly reduce consumer confusion, undesirable cross-reactions and/or interactions between incompatible ingredients.

In addition to any of the above recommendations, the set of laundering instructions will typically also include general usage instructions which recommend how to apply the laundry detergent composition to a fabric article, e.g., indirectly by adding the laundry detergent composition to an automatic washing machine prior to the beginning of the wash cycle.

Fabric Conditioning Composition

In the method of the present invention, a fabric conditioning composition is provided. The fabric conditioning composition useful herein is applied to the surface and/or the interior of a fabric article to modify the properties of the fabric article and to provide one or more benefits such as softness, skin comfort, reduced static, increased fluffiness, improved fiber and color maintenance, reduced wrinkling, reduced tangling, reduced surface friction, etc. The fabric article is thereby conditioned with the fabric conditioning composition.

Useful fabric conditioning compositions may be in liquid, solid, gel, or sheet form, and are typically applied to a fabric article in the wash cycle, in the rinse cycle, and/or during the drying cycle. Preferably, the fabric conditioning composition is applied to the fabric article in the rinse cycle, and/or in the drying cycle. In a highly preferred embodiment of the present invention, the fabric conditioning composition is a liquid fabric conditioning composition which is applied to the fabric article during the rinse cycle of a washing process.

The fabric conditioning composition typically contains from about 0.1% to about 90%, preferably from about 0.5% to about 70%, and more preferably from about 1% to about 40% of a fabric softening active such as an impalpable smectite clay, a silicone derivative, a cationic fabric softening active, and/or a mixture thereof. Preferred fabric softening actives include quaternary ammonium compounds or amine precursors thereof, cationic ammonium softening compounds, nonionic softening compounds, and mixtures thereof. More preferred fabric softening actives and fabric conditioning compositions include those disclosed in U.S. Patent 4,062,647 to Storm and Nirschl, issued December 13, 1977; U.S. Patent 4,375,416 to Crisp, et al., issued March 1, 1983; U.S. Patent 4,291,071 to Harris, et al., issued September 22, 1981; and PCT Patent Application U.S. 99/15056 to Bryant, et al., filed on July 1, 1999.

In a highly preferred embodiment, the fabric conditioning composition here is a clear, transparent, or translucent fabric conditioning composition. Specific examples of highly preferred fabric conditioning compositions include those disclosed in U.S. Patent 5,747,443 to Wahl, et al., issued May 5, 1998, and in U.S. Patent Application numbers 08/621,019; 08/620,627; 08/620,767; 08/620,513; 08/621,285; 08/621,299; 08/621,298; 08/620,626; 08/620,625; 08/620,772; 08/621,281; 08/620,514; and 08/620,958, all filed March 22, 1996, and all having the title "CONCENTRATED, STABLE, PREFERABLY CLEAR, FABRIC SOFTENING COMPOSITION".

The fabric conditioning composition may further comprise one or more adjunct ingredients such as a solvent, a perfume, an antibacterial agent, a deposition aid, a pH buffer, a dye, an optical brightener, a viscosity/dispersability modifier, a dye transfer inhibition agent, fabric surface modifiers such as silicones and polymers, a soil release agent, a phase stabilizer, a stabilizer, and a mixture thereof. Preferred adjunct ingredients include a surfactant, a pH buffer, a viscosity modifier, a perfume, a dye, and a mixture thereof.

The fabric conditioning composition is provided in a fabric conditioning composition container, such as a box, a bottle, and/or a pouch, which may further

contain a dosing device or an applicator device such as a scoop, a measuring cup, a pour spout, etc. Liquid and gel-type fabric conditioning compositions are preferably provided within a plastic bottle, more preferably a recyclable plastic bottle such as a polyethylene and/or polypropylene bottle. The fabric conditioning composition may also be provided in a pouch, especially a refill pouch.

The fabric conditioning composition typically has a set of conditioning instructions which contain a recommendation to use the fabric conditioning composition in combination with at least one fabric treatment composition, preferably in combination with at least one fabric treatment composition and a laundry detergent composition. More preferably, the set of conditioning instructions contain a recommendation to use the fabric conditioning composition after the laundry detergent composition, and in combination with the fabric treatment composition.

The set of conditioning instructions may be provided in virtually any location and in any form (e.g., visual, audio, tactile such as braille, etc.), as long as it is perceivable to a consumer purchasing the fabric conditioning composition. Thus, the set of conditioning instructions may be provided on a location such as a pamphlet, a computer screen, a printed ticket, a kiosk, a sign, a product container, an advertisement, a product display, an Internet website, and a combination thereof, preferably, the set of conditioning instructions are provided on a product container, a product display, or a combination thereof, as these locations are easy to reference. More preferably, the set of conditioning instructions are provided on the fabric conditioning composition's container, as the set of conditioning instructions is therefore unlikely to become lost and/or separated from the fabric conditioning composition when it is needed.

In a preferred embodiment, the set of conditioning instructions also contain a reference to the laundry detergent composition, the fabric treatment composition, or both. More preferably, the reference is the actual name of the laundry detergent composition, and/or the fabric treatment composition. Without intending to be limited by theory, it is believed that such a reference may significantly reduce consumer confusion, undesirable cross-reactions and/or interactions between incompatible ingredients.

In addition to any of the above recommendations, the set of conditioning instructions will typically also include general usage instructions which recommend how to apply the fabric conditioning composition to a fabric article, e.g., in diluted form, via addition to the rinse cycle.

Fabric Treatment Composition

In the method of the present invention, a fabric treatment composition is provided. The fabric treatment composition useful herein is selected from the group consisting of a bleaching composition, a color maintenance composition, a dryer sheet composition, a finishing composition, a pre-treating composition, and a combination thereof, preferably a bleaching composition, a color maintenance composition, a finishing composition, a pre-treating composition, and a combination thereof. If a fabric conditioning composition is provided, then a dryer sheet may not be needed, and thus, the fabric treatment composition is preferably selected from the group consisting of a bleaching composition, a color maintenance composition, a finishing composition, a pre-treating composition, and a combination thereof. The fabric article is treated with the fabric treatment composition.

The fabric treatment composition may be provided in virtually any physical form, preferably as a liquid, a solid, a foam, a gel, or a mixture thereof. The fabric treatment composition may also be applied directly and/or indirectly to the fabric article in either a concentrated, neat, or dilute form, as desired. Without intending to be limited by theory, it is believed that that the fabric treatment composition may provide especially improved results after multi-cycle use with the laundry detergent composition and/or the fabric conditioning composition. Preferably, two or more different fabric treatment compositions are provided and/or applied to the fabric article.

The bleaching composition useful herein provides a whitening and/or a brightening effect on the fabric article, and may contain any bleach *per se* known in the art, either alone, or in conjunction with any bleach activators and/or bleach boosters known in the art. A preferred bleach useful herein is a halide bleach, an oxygen bleach, and a mixture thereof, more preferably an oxygen bleach. Oxygen bleaches are highly preferred as they are typically safer on fabrics, especially colored fabrics, than halide-based bleaches.

Specific, non-limiting examples of the bleaching composition useful herein include those described in U.S. Patent. No. 5,559,090 to Scialla and Cardola, issued on September 24, 1996; U.S. Patent. No. 5,536,438 to Scialla, et al., issued on July 16, 1996; WO 95/21122 to Rapisarda, et al., published on August 10, 1995; U.S. Patent No. 6,037,317 to Rapisarda, et al., issued on March 14, 2000; WO 95/34621 to Scialla, et al., published on December 21, 1995; U.S. Patent No. 5,929,012 to Del Duca, et al., issued on July 29, 1999; U.S. Patent No. 5,910,473 to Aldano, et al., issued on June 8, 1999; U.S. Patent No. 6,001,794 to Del Duca, et al., issued on December 14, 1999; WO

97/02332 to Masotti, et al., published on January 23, 1997; WO 97/22407 to Bianchetti, et al., published on June 26, 1997; U.S. Patent No. 5,968,885 to Del Duca, et al., issued on October 19, 1999; U.S. Patent No. 5,641,739 to Kott and Willey, issued on June 24, 1997; WO 97/47558 to Del Duca, et al., published on December 18, 1997; U.S. Patent No. 6,019,797 to Del Duca, et al., issued on February 1, 2000; WO 98/11191 to Scialla, et al., published on March 19, 1998; WO 98/11189 to Burns, et al., published on March 19, 1998; WO 97/32962 to Del Duca, et al., published on September 12, 1997; WO 98/11192 to Masotti, et al., published on March 19, 1998; WO 98/18893 to Del Duca, et al., published on May 7, 1998; WO 98/ 22560 to Bertacchi, et al., published on May 28, 1998; WO 98/33879 to Del Duca, et al., published on August 6, 1998; WO 99/18181 to Del Duca, et al., published on April 15, 1999; WO 99/18179 to Del Duca, et al., published on April 15, 1999; WO 99/18183 to Del Duca, et al., published on April 15, 1999; WO 99/24540 to Del Duca, et al., published on May 20, 1999; WO 99/63033 to Del Duca, et al., published on December 19, 1999; WO 00/12666 to Campestrini, et al., published on March 9, 2000; and WO 00/15743 to Briatore, et al., published on March 23, 2000.

Dyes which are released from a fabric article in the wash (i.e., "fugitive" dyes) may later redeposit on the same fabric article, or another fabric article, and lead to undesirable spotting, or discoloration. Furthermore, abrasion of the fabric article surface in the wash may lead to a dulling of the fabric article's colors. The color maintenance composition useful herein may "lock" the colored dye(s) onto the fabric article so as to protect fabric from fugitive dye redeposition in the wash cycle. The color maintenance composition may also reduce fabric abrasion in the wash. These color maintenance techniques keep the fabric article's colors brighter and/or more vivid for a longer period of time. Such a color maintenance composition may thus reduce and/or prevent the fabric article from looking "old and worn".

The color maintenance composition may be applied to the fabric article as a treatment at any time, such as when the fabric article is new, before the fabric article's first laundering cycle, before any specific laundering cycle, in the rinse cycle during regular laundering, etc. In a preferred embodiment, the color maintenance composition is applied to a new fabric article before its first laundering cycle, so as to lock in as much dye as possible. More preferably, the color maintenance composition is applied to the fabric article before the fabric article's first laundering cycle and in one or more subsequent laundering cycles, so as to repeatedly lock dyes into the fabric article, to continuously protect fabric from build up of fugitive dye redeposition, and/or to protect

fibers from effects of repeated abrasion. Without intending to be limited by theory, it is believed that such a method of caring for a fabric article may substantially prolong the duration that a fabric article's colors remain bright and/or vivid. The color maintenance composition will preferably be applied to the fabric article by soaking it in a neat, or a diluted solution of the color maintenance composition.

Specific, non-limiting examples of the color maintenance composition useful herein include those described in WO 00/15745 to Littig, et al., published on March 23, 2000; and WO 00/15746 to Littig, et al., published on March 23, 2000.

The dryer sheet composition useful herein is typically provided to reduce the static charge of the fabric article by modifying the surface properties of the fabric article so as to reduce its charge. Many fabric softening actives described above with respect to fabric conditioning compositions may also be useful in a dryer sheet composition, as they may help reduce static charges, in addition to providing softness benefits. The dryer sheet composition may be applied to the fabric article at any point in the drying process. A preferred dryer sheet composition useful herein includes those described in U.S. Patent Application No. 09/227728 to Smith, et al., filed on January 8, 1999; U.S. Patent No. 5,942,286 to Godfroid, et al., issued on August 24, 1999; U.S. Patent No. 5,929,026 to Childs, et al., issued on July 27, 1999; U.S. Patent No. 5,883,069 to Childs, et al., issued on March 16, 1999; U.S. Patent No. 5,804,547 to Godfroid, et al., issued on September 8, 1998; and U.S. Patent No. 5,578,234 to Corona, et al., issued on November 26, 1996.

The finishing composition useful herein is characterized in that it is typically applied to the fabric article as one of the last steps prior to use (e.g., wearing) and/or in-between uses. The finishing composition provides the fabric article with one or more desirable properties such as crispness, wrinkle reduction, shape maintenance, color enhancement, whiteness enhancement, improved in-wear comfort, malodor reduction/prevention, stain protection, a desirable scent, fiber integrity maintenance, etc. The finishing composition is typically an ironing composition, a fabric styling composition, a wrinkle reduction composition, a stain prevention composition, or a combination thereof.

Preferred finishing compositions useful herein may include active compounds such as starch, a silicone compound, a cationic surfactant, a polymer, and a mixture thereof, at from about 0.1% to about 33%, preferably from about 0.5% to about 20%, and more preferably from about 1% to about 10%, by weight of the finishing composition.

In particular, a silicone compound is highly preferred in a finishing composition, as it is known to provide smooth ironing benefits, lubricity, and shape retention benefits. The silicone compound useful herein includes silicone gels, silicone surfactants, silicone fluids, silicone gum, and cross-linked silicone resins, as well as both linear silicones and branched silicones. Without intending to be limited by theory, it is believed that these silicones form cross-linked silicon-oxygen, silicon-amine, silicon-epoxy, and/or silicon-carboxy linkages to provide highly desirable wrinkle-reduction and ironing benefits. Useful silicones include the curable amine-functional silicones of EP 0 378 871 A2 to Coffindaffer, published on July 25, 1990; and U.S. Patent 4,419,391 to Tanaka, et al., issued December 6, 1983. Such silicones are available from Dow Corning (USA), as Silicone 531 and Silicone 536; General Electric (USA), as SF 1706. Specific examples of a preferred silicone gum includes polydimethylsiloxane (PDMS), poly(dimethylsiloxane methylvinylsiloxane) copolymer, poly(dimethylsiloxane diphenylsiloxane methylvinylsiloxane) copolymer and mixtures thereof.

A highly preferred silicone surfactant useful in the finishing composition is a silicone copolymer which is thought to provide significant wrinkle reduction, ease of ironing, fabric smoothness, and fabric softness benefits by reducing the coefficient of friction between the fabric article's fibers, as well as between the fabric article and an iron, or between the fabric article and the skin. Such silicone copolymers are available as SILWET® from CK Witco Corporation, South Charleston, West Virginia, USA, from Goldschmidt GMBH, Essen, Germany, and Dow Corning, Auburn, Michigan, USA. Even more preferred silicone copolymers useful herein include SILWET® L-7001 (MW = about 20,000) and SILWET® L-7200 (MW = about 19,000) from CK Witco Corp.

Another highly preferred compound useful in the finishing composition is a copolymer of acrylate and methacrylate, preferably having an acrylate:methacrylate ratio of about 1:2 to 2:1, and more preferably having an acrylate:methacrylate ratio of about 1:1 and a molecular weight of about 250,000 to about 500,000. Such copolymers may provide excellent crispness and tensile properties, while minimizing fabric stiffness, which some consumers find undesirable. Such copolymers are available from, for example, BASF Aktiengesellschaft, Ludwigshafen, Germany, as LUVIMER SOFT™.

If malodor reduction is desired in the finishing composition, then a perfume, pro-perfume, and/or a malodor reducer may be included. Especially useful malodor reducers include those that absorb malodors, such as a cyclodextrin, and anti-microbial compounds which kill the germs and microorganisms which may cause bad odor. Preferably a modified cyclodextrin and/or an anti-bacterial agent, and more preferably a

methylated cyclodextrin, a hydroxypropyl beta cyclodextrin, an anti-bacterial agent, and a mixture thereof is included as a malodor reducer. Such cyclodextrins are available from, for example, Cerestar International, Neuilly-sur-Seine, France.

The finishing composition may also include an aromatic composition which
5 delivers a selectable, and/or personalizable, desirable scent to the fabric article. Such a scent may be then gradually released as the fabric article is used, worn, and/or handled. Aromatic delivery systems useful herein are known in the art, and include sprays, pro-
10 perfumes, absorption onto inert carriers, etc. The desirable scent applicable in the present invention includes essential oils, perfumes, herbal extracts, citrus scents, aromatherapy scents, and other scents known in the perfume art. The aromatic
composition may be selected and/or personalized by referring to a computer profile, as discussed herein, or by otherwise collecting scent preference information from the consumer.

The finishing composition herein may also include a compound which protects
15 the fabric article from future stains. Such compounds are known in the art, and may protect the fabric article, for example, by modifying its hydrophobicity/hydrophilicity, reducing the coefficient of friction, coating the surface with a polymer, etc.

Preferred finishing compositions useful herein include those described in U.S.
Patent No. 6,033,679 to Woo, et al., issued on March 7, 2000; U.S. Patent No.
20 6,001,343 to Trinh, et al., issued on December 14, 1999; U.S. Patent No. 5,997,759 to Trinh, et al., issued on December 7, 1999; and U.S. Patent No. 5,942,217 to Woo, et al., issued on August 24, 1999.

In a highly preferred embodiment, the finishing composition acts as a fabric
refresher composition and/or a home dry cleaning composition which, respectively,
25 reduces odors, and/or reduces the need for dry cleaning of the fabric article. Highly preferred fabric refresher compositions are include those described in, U.S. Patent No. 5,714,137 to Trinh, et al., issued on February 3, 1998; U.S. Patent No. 5,593,670 to Trinh, et al., issued January 14, 1997; U.S. Patent No. 5,939,060 to Trinh, et al., issued on August 17, 1999. A home dry cleaning apparatus or kit may also be included herein,
30 especially those described in, for example, U.S. Patent No. 5,789,368 to You, et al., issued on August 4, 1998; and U.S. Patent No. 5,762,648 to Yeazell, issued on June 9, 1998.

In a preferred embodiment, the finishing composition is provided as a spray-on
finishing composition, especially a spray-on ironing composition. Such a finishing

composition may be easily applied to the fabric article, evenly applied across the fabric article, specifically applied to a limited portion of the fabric article, etc.

The pre-treating composition useful herein is typically applied to a specific portion of the fabric article for the purpose of removing a specific undesirable compound a fabric article, such as a spot, ground-in-soil, a stain, a discoloration, an odor, etc., which the regular laundering process may not completely remove. A pre-treating composition may contain therein one or more surfactants, enzymes, bleaches, and/or solvents for a specific type of stain, etc., but is primarily distinguished from a laundry detergent composition and/or a fabric conditioning composition in that it is intended to be specifically applied to a portion of the fabric article, before the entire fabric article is subjected to the laundering cycle. The fabric treatment instructions will typically include a recommendation that the pre-treatment composition be directly applied, in either neat or diluted form, to the undesirable compound on the fabric article.

Preferred pre-treating compositions useful herein include a spot-treater, a bleach, an enzyme composition, a stain remover, and a mixture thereof. Such pre-treating compositions are preferably in a solid form, a stick-like form, a liquid form, or a gel form.

The fabric treatment composition is provided in a fabric treatment composition container, such as a box, a bottle, and/or a pouch, which may further contain a dosing device and/or an applicator device. Solid and granular fabric treatment compositions are typically provided in a box or a bottle, preferably a cardboard box or a plastic box, and more preferably a laminated cardboard box, or a plastic box. Without intending to be limited by theory, it is believed that a laminated cardboard box and/or a plastic box may be especially advantageous, as these boxes may be easily recyclable, and may also be adjusted to provide desirable properties, such as a watertight seal, moisture resistance, reclosability, etc. Liquid and gel-type fabric treatment compositions are preferably provided within a plastic bottle, more preferably a recyclable plastic bottle such as a polyethylene and/or polypropylene bottle. The fabric treatment composition may also be provided in a pouch, especially a refill pouch.

The fabric treatment composition, especially a pre-treating composition and/or a finishing composition, is preferably provided with, or provided in, a container which includes an applicator which further provides a cleaning or fabric enhancement benefit. For example, a scoop, a measuring cup, a pour spout, a brush, or scrubber may be provided, either as part of the container, or separately, to enhance application of the pre-treating composition to the fabric article, and/or a specific portion thereof. Without

intending to be limited by theory, it is believed that an applicator enhances contact between the pre-treatment composition and the fabric article, so as to more effectively remove the undesirable compound. Furthermore, convenience is enhanced, and physical agitation may significantly loosen, or dislodge the undesirable compound from the fabric article, with minimal effort and inconvenience to the user. Particularly useful applicators herein include those which simultaneously deliver the product, and provide a cleaning or fabric enhancement benefit, especially a brush, a membrane or scrim, a sprayer, a natural or artificial sponge, a luffa sponge, and/or a nylon/plastic "puff". It is highly preferred that the applicator be connected to a reservoir in which the fabric treatment composition is stored prior to application to the fabric article. Highly preferred pre-treatment devices are described in WO 99/37849 to Deflander, et al., published on July 29, 1999; WO 98/16438 to Fukushima, et al., published on April 23, 1998; WO 98/16623 to Shindo, et al., published on April 23, 1998; and WO 98/16148 to Fukushima, et al., published on April 23, 1998.

A set of fabric treatment instructions is provided which include a fabric treatment recommendation to use the fabric treatment composition in combination with the laundry detergent composition, the fabric conditioning composition, another fabric treatment composition, and/or a combination thereof. The set of fabric treatment instructions may be provided in virtually any location and in any form (e.g., visual, audio, tactile such as braille, etc.), as long as it is perceivable to a consumer purchasing the fabric treatment composition. Preferably, the set of fabric treatment instructions is provided on a location such as a pamphlet, a computer screen, a printed ticket, a kiosk, a sign, a product container, an advertisement, a product display, an Internet website, a video, and a combination thereof, preferably the set of fabric treatment instructions are provided on a product container, a product display, or a combination thereof, as these locations are easy to reference. More preferably, the set of fabric treatment instructions are provided on the fabric treatment composition's container, as the set of fabric treatment instructions is thus unlikely to become lost and/or separated from the fabric treatment composition when it is needed.

Preferably, the set of fabric treatment instructions also contains a reference to the laundry detergent composition, the fabric conditioning composition, another fabric treatment composition, and/or a combination thereof. More preferably, the reference is the actual name of the referred-to laundry detergent composition, fabric conditioning composition, and/or other fabric treatment composition. Without intending to be limited by theory, it is believed that such a reference may significantly reduce consumer

confusion, undesirable cross-reactions and/or interactions between incompatible ingredients.

Furthermore, depending upon the typical use of the fabric treatment composition, the set of fabric treatment instructions may include a pre-laundering recommendation, a post-laundering recommendation, a pre-conditioning recommendation, a post-conditioning recommendation, or a combination thereof. As used herein, a "pre-laundering recommendation" is a recommendation to use the fabric treatment composition before a laundry detergent composition. As used herein, a "post-laundering recommendation" is a recommendation to use the fabric treatment composition after a laundry detergent composition. As used herein, a "pre-conditioning recommendation" is a recommendation to use the fabric treatment composition before a fabric conditioning composition. As used herein, a "post-conditioning recommendation" is a recommendation to use the fabric treatment composition after a fabric conditioning composition.

If a laundry detergent composition is provided, and the fabric treatment composition is a dryer sheet composition, a finishing composition, a color maintenance composition, or a combination thereof, then it is highly preferred that the fabric treatment recommendation includes a post-laundering recommendation to use the fabric treatment composition after the laundry detergent composition. Conversely, if a laundry detergent composition is provided and the fabric treatment composition is a bleaching composition, a color maintenance composition, a pre-treating composition, or a combination thereof, preferably a color maintenance composition, a pre-treating composition, or a combination thereof, then it is highly preferred that the fabric treatment recommendation includes a pre-laundering recommendation to use the fabric treatment composition before the laundry detergent composition.

If a fabric conditioning composition is provided, and the fabric treatment composition is a bleaching composition, a color maintenance composition, a pre-treating composition, or a combination thereof, preferably a color maintenance composition, a pre-treating composition, or a combination thereof, then it is highly preferred that the fabric treatment recommendation includes a pre-conditioning recommendation to use the fabric treatment composition before the fabric conditioning composition. Alternatively, if a fabric conditioning composition is provided and the fabric treatment composition is a dryer sheet composition, a finishing composition, a color maintenance composition, or a combination thereof, preferably a finishing composition, a color maintenance composition, or a combination thereof, then it is highly preferred that the

fabric treatment recommendation includes a post-conditioning recommendation to use the fabric treatment composition after the fabric conditioning composition.

In addition to the above recommendations, the set of fabric treatment instructions will typically also include general usage instructions which recommend how to apply the fabric treatment composition to a fabric article.

In a highly preferred embodiment, the set of laundering instructions, the set of fabric conditioning instructions, and/or the set of fabric treatment instructions are a set of personalized instructions. Such a set of personalized instructions may be provided by, for example, collecting from the consumer one or more pieces of personal data, such as name, address, email address, clothing characteristics, usage characteristics, water hardness conditions, family member characteristics, packaging preferences, color preferences, scent preferences, fabric article preferences, cleaning preferences or cleaning needs, laundering frequency, whether or not the consumer owns a water softener, etc.; determining a consumer profile by employing a mathematical algorithm, a consumer profiling database, a statistical analysis, etc.; and providing to the consumer a set of personalized instructions either directly, or indirectly. The set of personalized instructions may be provided via, for example, a printed label, an email message, a printed sheet of instructions, an Internet website, direct or indirect conveyance to the consumer's home and/or to a laundering appliance, etc.

In the present method, the compositions herein are each provided within their own containers; thus, the laundry detergent composition is provided within a laundry detergent container, the fabric conditioning composition is provided within a fabric conditioning container, and the fabric treatment composition is provided within a fabric treatment container.

While it is highly preferred in the method of the present invention that the laundry detergent composition, the fabric conditioning composition, and/or the fabric treatment composition be used in combination with each other, it is recognized that each of these compositions possess an independent activity when used alone. Accordingly, these compositions may be sold either together, i.e., on the same shelf, or in the same product display, or separately, i.e., in different locations in the same store, or in different stores. Therefore, to facilitate consumer recognition, reduce consumer confusion, and increase ease of use, it is highly preferred that the fabric treatment composition and the laundry detergent composition and/or the fabric conditioning composition possess one or more coordinated elements such as a brand name, a characteristic ingredient, container

graphics, containers, the dosages per container, a dye, a perfume, a trade dress, and a combination thereof.

Examples of the invention are set forth hereinafter by way of illustration and are not intended to be in any way limiting of the invention.

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EXAMPLE 1

A liquid laundry detergent composition, a clear, liquid fabric conditioning composition, and a color maintenance composition are provided in three separate containers, for use on a fabric article. The laundry detergent composition is provided with a set of laundering instructions on the bottle label, which specifically refer to the fabric conditioning composition and the color maintenance composition by name. The set of laundering instructions also recommend that best results are achieved when the consumer uses the laundry detergent composition in combination with the fabric conditioning composition and the color maintenance composition. The fabric conditioning composition has a similar set of instructions which refer to both the laundry detergent composition and the color maintenance composition by name.

The color maintenance composition has a set of fabric treatment instructions which refers to both the laundry detergent composition and the fabric conditioning composition by name, and also has a fabric treatment recommendation to use the color maintenance composition in combination with the laundry detergent composition and the fabric conditioning composition. The fabric treatment recommendation contains a pre-laundering recommendation and a pre-conditioning recommendation that the best results are achieved by using the color maintenance composition before the first laundering cycle for new garments and before the conditioning cycle for succeeding uses, so as to lock in the colors and repeatedly protect the fibers of the fabric article from abrasion.

EXAMPLE 2

A liquid laundry detergent composition, a liquid fabric conditioning composition, and a solid pre-treatment composition are provided as described in Example 1, except that these three compositions are sold together as a fabric care kit, and that the fabric treatment recommendation suggests to apply the solid pre-treatment stick directly to stains and spots on the fabric article. In addition to the set of instructions on each container, another, single set of instructions detailing all of the above recommendations is provided within the kit, itself.

When used in combination and as per the instructions, the liquid laundry detergent composition and the liquid fabric conditioning composition provide excellent cleaning, are gentle to the fabric articles, and leave no residue on the fabric article or on the washing appliance.

EXAMPLE 3

A granular laundry detergent composition is provided in a laundry detergent container. A liquid, oxygen bleach-based bleaching composition is provided in a fabric treatment container, which contains a set of fabric treatment instructions. These instructions refer to the laundry detergent composition by name, and include a post-laundering recommendation to apply the bleaching composition to the fabric article after laundering it with the laundry detergent composition, for example, by adding the bleaching composition during the rinse cycle of an automatic washing machine.

EXAMPLE 4

A color maintenance composition is provided in a first fabric treatment container, and a color-safe bleach is provided in a second fabric treatment container. The first fabric treatment container and the second fabric treatment container have a common construction, the same brand name, and almost identical graphics. The color maintenance composition and the color-safe bleach are located next to each other in a product display.

The first fabric treatment container contains a set of fabric treatment instructions which identifies both products by name, and recommends that for superior results, the color maintenance composition should be used in combination with the color-safe bleach.

EXAMPLE 5

A laundry detergent composition, a fabric conditioning composition, a dryer sheet, a color-safe bleach, a color maintenance composition, a spray-on ironing composition, a fabric refresher composition, and an enzymatic stain remover are provided as a fabric care system. These compositions are placed next to each other on adjacent store shelves. All compositions are packaged within individual containers. Furthermore, all containers have a similar construction, the same brand name, and almost identical graphics. All compositions have similar aesthetics, such as color, and perfume. The enzymatic stain remover includes a separate pre-treatment applicator

consisting of a reservoir and a soft brush-type applicator for scrubbing the fabric article. The compositions are applicable on all types of natural and artificial fabrics, such as those made of cotton, nylon, rayon, wool, and silk.

A set of instructions is provided on each individual container, which refers to the laundry detergent composition, the fabric conditioning composition, the bleaching composition, the color maintenance composition, the dryer sheet composition, the finishing compositions, and the pre-treatment composition by name, and further recommends that these compositions be used in combination with each other, for superior fabric care results. Each individual container also contains a set of general usage instructions for the composition contained therein.

Such a fabric care system is easily understood and conceptualized by the consumer, who may easily select the desired components while being assured that they are mutually compatible, and will give the desired results. When used as recommended, the fabric care system provides bright whites and vivid colors, as well as stain and odor removal and improved cleaning. Fabrics and clothes to which the entire system are applied are soft, wrinkle-free, and have reduced static. Furthermore, after multiple washing cycles, the colors are noticeably brighter and more vivid and the fabric articles are newer-looking, as compared to a regularly-laundered fabric article.

EXAMPLE 6

A laundry detergent composition, a fabric conditioning composition, a bleaching composition, a color maintenance composition, a dryer sheet composition, a finishing composition, and a pre-treatment composition are provided as a fabric care system as in Example 5, except that the set of fabric treatment instructions is located on a sign near the shelf.

EXAMPLE 7

A laundry detergent composition, a fabric conditioning composition, a bleaching composition, a color maintenance composition, a dryer sheet composition, a finishing composition, and a pre-treatment composition are provided as a fabric care system as in Example 5, except that the set of fabric treatment instructions is located on a printed ticket which also includes a coupon which offers a discount when at least two compositions are purchased together. When a consumer approaches the shelf, a coupon printer located on the shelf automatically prints the printed ticket.

EXAMPLE 8

A laundry detergent composition, a fabric conditioning composition, a bleaching composition, a color maintenance composition, a dryer sheet composition, a finishing composition, and a pre-treatment composition are provided as a fabric care system as in
5 Example 5, except that these compositions are located on a stand-alone kiosk. Also, the set of fabric treatment instructions is located on the kiosk's computer display which is connected to an Internet website.

When activated, the kiosk's computer display shows a short video which recommends to the viewer that superior fabric care results are achieved when the fabric
10 care system is used as instructed.

EXAMPLE 9

A laundry detergent composition, a fabric conditioning composition, a bleaching composition, a color maintenance composition, a dryer sheet composition, a finishing composition, and a pre-treatment composition are provided as a fabric care system as in
15 Example 8, except that these compositions are located on a stand-alone kiosk containing a computer with a touch-sensitive screen for entering data. The computer is connected to a consumer profiling database located on the Internet.

At the computer, the consumer is asked to enter personal data, in order to
20 produce a set of personalized instructions. The consumer is asked for personal information such as name, address, email address, clothing characteristics, usage characteristics, family member characteristics, scent preferences, fabric article preferences, cleaning preferences or cleaning needs, and laundering frequency. The computer gathers the personal data provided and generates a consumer profile by using
25 a mathematical algorithm to correlate the personal data entered with that stored in the consumer profiling database. In addition, the computer determines the likely water hardness by cross-referencing the consumer's address with known databases describing local water hardness and conditions.

The consumer profile is then used to generate a set of personalized instructions
30 for the consumer. The set of personalized instructions is provided on one or more computer-printed adhesive labels which the consumer is instructed to attach to one or more of the laundry detergent composition container, the fabric conditioning composition container, and/or the fabric treatment composition container.

EXAMPLE 10

A laundry detergent composition, a fabric conditioning composition, a bleaching composition, a color maintenance composition, a dryer sheet composition, a finishing composition, and a pre-treatment composition are provided as a fabric care system as in Example 9, and a set of personalized instructions are generated, as described. In addition, the set of personalized instructions are directly transmitted to the consumers' home computer, via the Internet, and from there to the consumer's home washing appliance.

EXAMPLE 11

A laundry shampoo composition, a fabric conditioning composition, and a fabric refresher composition are provided as a fabric care kit as in Example 2, except that the fabric treatment instructions recommend that the fabric refresher be used after the fabric conditioning composition, and on occasions where the fabric article (e.g., a shirt) is used (e.g., worn) multiple times in-between laundering cycles. The fabric refresher composition effectively absorbs odors and refreshes the fabric article, thus reducing the need for laundering cycles. This in turn, enhances the longevity of the fabric article.